

REMARKS

In the Office Action dated July 17, 2008, a typographical error was noted in claim 1, which has been corrected.

Claims 1, 2, 5-8, 11-12 and 15-23 were rejected under 35 U.S.C. §102(b) as being anticipated by Nakazawa.

This same rejection was made in the Office Action dated December 13, 2007, to which Applicant responded by stating that the Nakazawa reference does not disclose providing at least two directional microphone signals with respective weightings. The Examiner stated such a disclosure is present in the Nakazawa reference by virtue of the subtractors 11A weighting one signal in the Nakazawa circuit as a positive one, and the other as a minus one. This is not a trivial difference between the subject matter disclosed and claimed in the present application and the subject matter disclosed in the Nakazawa reference, because it is further stated in the independent claims of the present application that the aforementioned weightings define a direction-dependent sensitivity distribution that has a minimum in one direction, for the respective directional microphone signals. The Examiner stated that the Nakazawa reference provides such a disclosure in Figure 1B thereof, but Applicant submits that Figure 1B of Nakazawa does not illustrate any type of direction-dependent sensitivity *distribution*, but merely illustrates the situation that occurs when subtraction of the signals from two microphones is undertaken. Therefore, the assignment of a minus one to one of the directional microphone signals is not a "weighting" in the sense of claim 1 of the present application, since it is not "sensitive" to any direction, but is simply an arbitrary assignment of a polarity that is given to one of the incoming signals. Since every signal from the microphone

that is connected to the subtractor 11A in each block for each pair of microphones *always* has the *identical* value (namely minus one) assigned thereto, this value is not and cannot be dependent on anything, and thus is not “sensitive” to any direction, and therefore does not represent any type of “distribution.” Moreover, since the “weighting” that the Examiner has found to be disclosed in the Nakazawa reference always has the same value, i.e., it never changes, it clearly does not have a minimum in one direction, as also explicitly required in the independent claims.

The aforementioned weighting allows the subsequent “assessing” and “comparing” that is set forth in each of the independent claims of the present application to take place. If such weighting is not present, as in the Nakazawa reference, the “assessing” and “comparing” steps cannot proceed in Nakazawa in the same manner as set forth in claim 1, because the results of the “assessing” and “comparing” steps are inextricably tied to the fact that the signals that are being assessed and/or the signals being compared do, in fact, have the aforementioned “weightings.” In response to these previously-made arguments, the Examiner, in the July 17, 2008 Office Action, stated that the directional characteristics shown in Figure 1 of the Nakazawa reference are “direction-dependent sensitivity distributions,” that exhibit sensitivity to sound in a given direction. The Examiner stated the weightings provided by the subtractors 11A, and the choice of microphone inputs, define the pattern. The Examiner stated “Applicant in general argues points about the weighting that are claimed to belong to the direction-dependent sensitivity distribution, not the weightings.” This statement by the Examiner is not fully understood since each of the independent claims of the present application explicitly states that the respective weightings themselves define the direction-dependent

sensitivity distribution. In the claims of the present application, if the respective weightings were not present (and applied to the phase-shifted output microphone signals) there would no sensitivity distribution, since the sensitivity distribution in the subject matter of the present application arises due to the weightings themselves. Even if the assignment of positive one and minus one is considered (contrary to Applicant's arguments above) to be a "weighting," there still would be (allegedly) a direction-dependent sensitivity distribution in the Nakazawa reference, even if such (alleged) "weightings" were not present. Such is not the case in the subject matter of the independent claims of the present application. Moreover, the Examiner stated that the distributions in Nakazawa are dependent on direction and have minimums as shown at angle zero in Figure 1B of the Nakazawa reference. As noted in Applicant's previous response, Figure 1B in Nakazawa does not show any type of *distribution*, but merely illustrates the result that occurs after subtraction of the signals from the two microphones. At page 3 of the Office Action, the Examiner argues that this subtraction represents a phase shift of 180°, but a person of ordinary skill in the field of microphone signal processing would clearly know that this is not the case in any realistic circuit. In order for subtraction of one signal from another to result in, or be the equivalent of, a phase shift of 180°, the special case would have to exist of a purely sinusoidal microphone signal, because only then would $\sin(\pi x) = -\sin(x)$. The assumption of purely sinusoidal microphone signals, however, is completely unrealistic, and would not be an assumption that a person of ordinary skill in the field of audio signal processing would make as to the signals that exist in any realistic audio processing circuit. Moreover, the claims of the present

application do not claim a phase shift plus a subsequent addition, as taught by Nakazawa.

Applicant therefore respectfully submits that the Nakazawa reference does not disclose all of the elements of any of claims 1, 2, 5-8, 11-12 or 15-23, and therefore does not anticipate any of those claims.

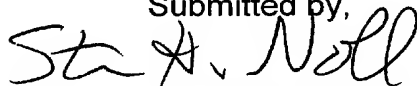
The above arguments are equally applicable to the rejection of claims 3, 4, 9, and 10 under 35 U.S.C. §103(a) as being unpatentable over Nakazawa, and the rejection of claims 13, 14 and 24-27 under 35 U.S.C. §103(a) as being unpatentable over Nakazawa in view of Elko et al. In view of the aforementioned basic differences between the subject matter of the independent claims, and the disclosure of the Nakazawa reference, even if the Nakazawa reference were further modified according to the content of its own disclosure, or according to the content of the disclosure of Elko et al., the subject matter of the aforementioned additional claims still would not result.

All claims of the application are therefore submitted to be in condition for allowance.

The present Amendment does not more than correct a typographical error, and thus does not raise any new issues requiring further searching or consideration. Entry of the present Amendment after the Final Rejection is therefore respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required, or to credit any overpayment to account No. 501519.

Submitted by,



(Reg. 28,982)

SCHIFF, HARDIN LLP
CUSTOMER NO. 26574
Patent Department
6600 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606
Telephone: 312/258-5790
Attorneys for Applicant

CH1\6029303.1